ENGAGE™ 8003

Polyolefin Elastomer

The Dow Chemical Company

Message:

ENGAGE™ 8003 Polyolefin Elastomer is an ethylene-octene copolymer that has excellent flow characteristics and performs well in a wide variety of general purpose thermoplastic elastomer applications.
ENGAGE 8003 provides superb impact properties in blends with polypropylene (PP) and polyethylene (PE). It also provides high filler loading capability and outstanding peroxide cure capability. When cross-linked by peroxide, silane, or irradiation, it gives exceptional heat aging, compression set, and weather resistance properties, and may be used to produce high performance electrical insulation and jacketing.
Main Characteristics:
Pellet form
Excellent flow characteristics
Improved impact in polypropylene and polyethylene
High filler loading
Peroxide, silane, and radiation curable
Exceptional heat aging, compression set, and weather resistance
Complies with:
U.S. FDA 21 CFR 177.1520(c)3.2c
EU, No 10/2011
Japan Hygienic Olefin and Styrene Plastics Association
U.S. FDA DMF
Consult the regulations for complete details.
Applications:
General purpose thermoplastic elastomers
Wire and cable
Impact modification

General Information	
Agency Ratings	DMF Unspecified Rating EU No 10/2011 FDA 21 CFR 177.1520(c) 3.2c JHOSPA Unspecified Rating
Forms	Pellets

Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.885	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	1.0	g/10 min	ASTM D1238
Mooney Viscosity (ML 1+4, 121°C)	22	MU	ASTM D1646
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness			ASTM D2240
Shore A, Compression Molded	84		
Shore D, Compression Molded	31		
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus - 100% Secant [1] (Compression Molded)	4.80	MPa	ASTM D638
Tensile Strength [2] (Break, Compression Molded)	18.2	MPa	ASTM D638

Tensile Elongation [3] (Break, Compression Molded)	640	%	ASTM D638
Flexural Modulus			ASTM D790
1% Secant : Compression Molded	33.7	MPa	
2% Secant : Compression Molded	32.6	MPa	
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tear Strength [4]	61.0	kN/m	ASTM D624
Thermal	**Nominal Value**	**Unit**	**Test Method**
Glass Transition Temperature	-46.0	°C	Internal Method
Vicat Softening Temperature	63.0	°C	ASTM D1525
Melting Temperature (DSC) [5]	77.0	°C	Internal Method
Peak Crystallization Temperature (DSC)	60.0	°C	Internal Method
NOTE			
1.	510 mm/min		
2.	510 mm/min		
3.	510 mm/min		
4.	Die C		
5.	10°C/min		

Recommended distributors for this material

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